

=> d his l25-

(FILE 'HCAPLUS' ENTERED AT 16:15:36 ON 03 DEC 2010)

FILE 'REGISTRY' ENTERED AT 16:18:02 ON 03 DEC 2010

FILE 'HCAPLUS' ENTERED AT 16:18:04 ON 03 DEC 2010

E US2005-535373/AP

L25            1 S E3  
              SEL RN

FILE 'REGISTRY' ENTERED AT 16:29:49 ON 03 DEC 2010

L26            11 S E1-11

FILE 'HCAPLUS' ENTERED AT 16:30:36 ON 03 DEC 2010

L27            1 S L24 AND L25  
L28            QUE (PHOTO OR LIGHT) (N) SENS? OR PHOTSENS? OR LIGHTSENS?  
L29            14 S (L20 OR L22) AND L28  
L30            11 S L29 NOT L24

=> d ibib abs hitstr hitind l30 1-11

L30 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER:        2010:940562 HCAPLUS Full-text

DOCUMENT NUMBER:        153:275104

TITLE:                    Semiconductor electrode containing  
                          phthalocyanine dye and photoelectric converter  
INVENTOR(S):              Kamesaki, Hisamitsu; Torii, Masafumi; Hibino,  
                          Eiko; Harada, Shigeyuki; Horiuchi, Tamotsu;  
                          Takada, Mikiko; Hayashi, Yoshitaka

PATENT ASSIGNEE(S):      Ricoh Co., Ltd., Japan

SOURCE:                  Jpn. Kokai Tokkyo Koho, 17pp.

CODEN: JKXXAF

DOCUMENT TYPE:            Patent

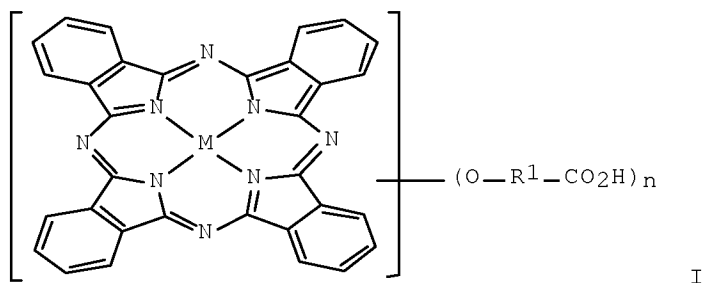
LANGUAGE:                Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2010165545	A	20100729	JP 2009-6495	200901 15
PRIORITY APPLN. INFO.:			JP 2009-6495	200901 15

OTHER SOURCE(S):        MARPAT 153:275104  
GI



AB The title electrode is equipped with an inorg. semiconductor and a carboxyl group-containing phthalocyanine-type photosensitizing dye I (M = Cu, Zn, or Ru; R<sup>1</sup> = divalent aromatic ring.; n = 1-4 integer). The title photoelec. converter, e.g., solar cell, optical sensor, is equipped with the semiconductor electrode and a counter electrode placed via an electrolyte layer. The electrode provides high sensitivity to near-IR region, and high utilization of the solar light.

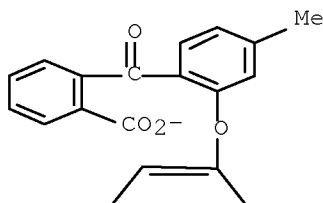
IT 1236954-13-4 1236954-20-3

RL: TEM (Technical or engineered material use); USES (Uses)  
(dye; semiconductor electrode containing phthalocyanine dye for photoelec. converter)

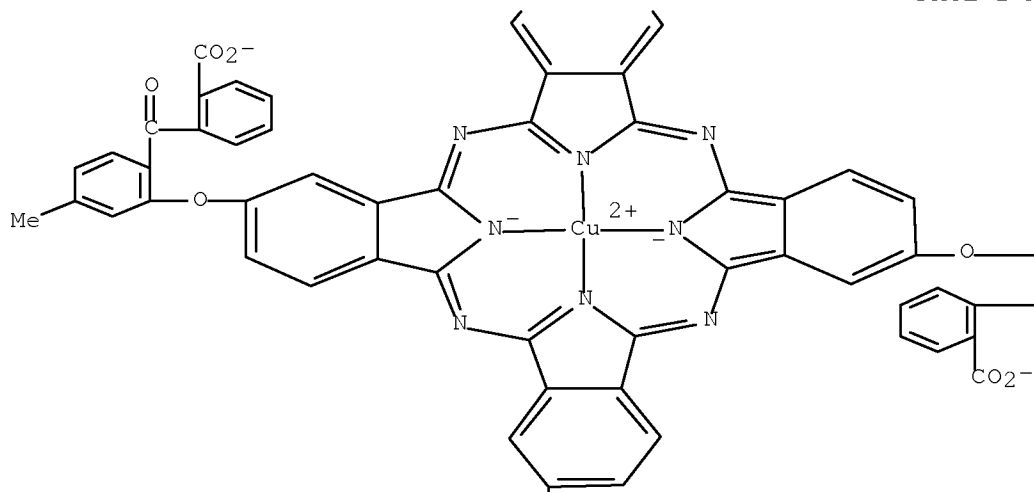
RN 1236954-13-4 HCAPLUS

CN Cuprate(4-), [[2,2',2'',2'''-(2,9,16,23-tetrayl-κN29,κN30,κN31,κN32)tetrakis[oxy(4-methyl-2,1-phenylene)carbonyl]]tetrakis[benzoato]](6-)]-, hydrogen (1:4), (SP-4-1)- (CA INDEX NAME)

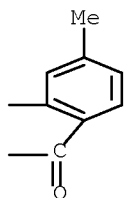
PAGE 1-A



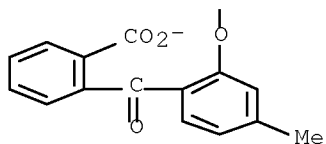
PAGE 2-A



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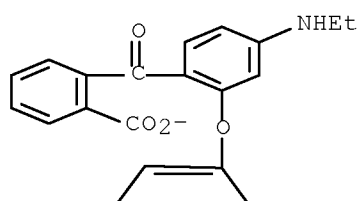


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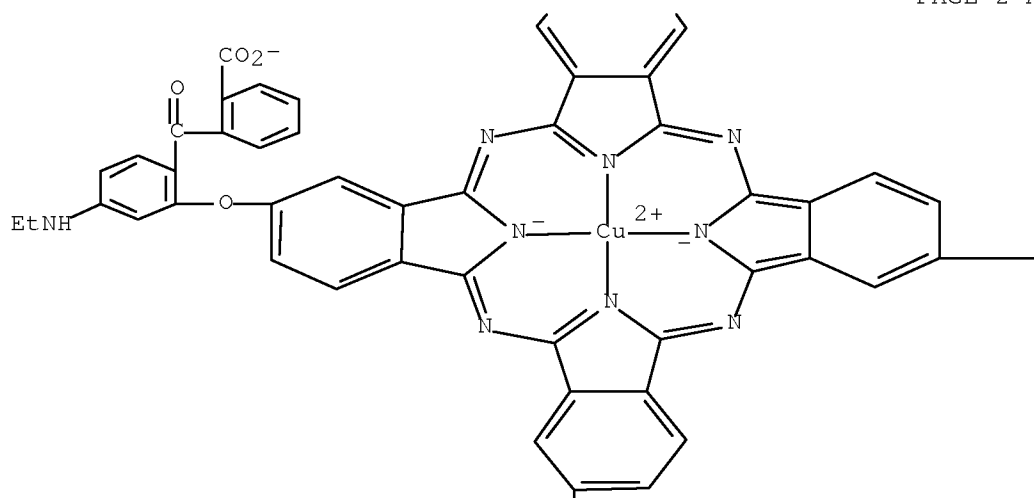
● 4 H<sup>+</sup>

RN 1236954-20-3 HCAPLUS  
 CN Cuprate(4-), [[2,2',2'',2'''-(29H,31H-phthalocyanine-2,9,16,23-tetrayl-κN29,κN30,κN31,κN32)tetrakis[oxy[4-(ethylamino)-2,1-phenylene]carbonyl]]tetrakis[benzoato]](6-)]-, hydrogen (1:4), (SP-4-1)- (CA INDEX NAME)

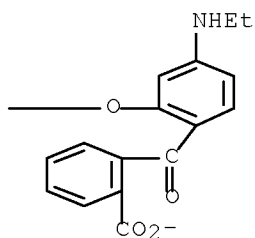
PAGE 1-A



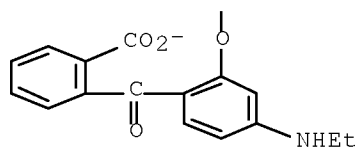
PAGE 2-A



PAGE 2-B



PAGE 3-A

● 4 H<sup>+</sup>

IPCI H01M0014-00 [I,A]; H01L0031-04 [I,A]; C09B0047-18 [N,A]; C09B0047-04 [N,C\*]

IPCR H01M0014-00 [I,C]; H01M0014-00 [I,A]; C09B0047-04 [N,C]; C09B0047-18 [N,A]; H01L0031-04 [I,C]; H01L0031-04 [I,A]

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 52, 73

IT 1236954-13-4 1236954-17-8 1236954-19-0

1236954-20-3 1236954-21-4 1236954-23-6

RL: TEM (Technical or engineered material use); USES (Uses)

(dye; semiconductor electrode containing phthalocyanine dye for photoelec. converter)

L30 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2010:910606 HCAPLUS Full-text

DOCUMENT NUMBER: 153:245579

TITLE: ~~Photosensitive~~ resin compositions  
containing phthalocyanine colorants for  
near-infrared absorbers, optical filters, their  
manufacture, and liquid crystal displays  
equipped therewith

INVENTOR(S): Koyama, Yoshinori

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2010160380	A	20100722	JP 2009-3233	20090109
PRIORITY APPLN. INFO.:			JP 2009-3233	20090109

AB The compns. contain (A) colorants containing phthalocyanines having absorption maximum wavelength in the near-IR region, (B) binder resins, (C) photopolymerizable compds., (D) photopolymn. initiators, and (E) solvents. The optical filters with fine patterns are manufactured by application of the compns. on a substrate, stripping of the solvent, exposure through a mask, development, and heat treatment.

IT 928306-01-8, Excolor IR 17

RL: TEM (Technical or engineered material use); USES (Uses)

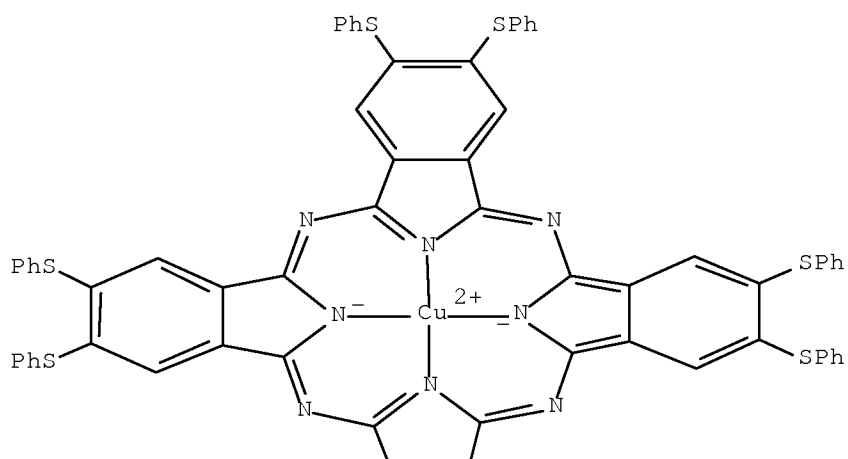
(Excolor IR 17, colorant; ~~photosensitive~~ resin compns.

containing phthalocyanine colorants and giving near-IR-absorbing fine patterns for optical filters for LCD)

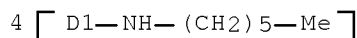
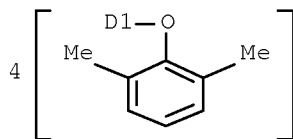
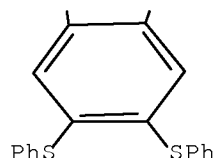
RN 928306-01-8 HCAPLUS

CN Copper, [C,C,C,C-tetrakis(2,6-dimethylphenoxy)-NC,NC,NC,N1-tetrahexyl-2,3,9,10,16,17,23,24-octakis(phenylthio)-29H,31H-phthalocyanine-C,C,C,1-tetraminato(2-)-κN29,κN30,κN31,κN32]- (CA INDEX NAME)

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PAGE 2-A



IPCI G02B0005-22 [I,A]; G03F0007-004 [I,A]; G03F0007-40 [I,A];  
 C09K0003-00 [I,A]; C07D0487-22 [N,A]; C07D0487-00 [N,C\*]  
 IPCR G02B0005-22 [I,C]; G02B0005-22 [I,A]; C07D0487-00 [N,C]; C07D0487-22  
 [N,A]; C09K0003-00 [I,C]; C09K0003-00 [I,A]; G03F0007-004 [I,C];  
 G03F0007-004 [I,A]; G03F0007-40 [I,C]; G03F0007-40 [I,A]  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related  
 Properties)  
 Section cross-reference(s): 74  
 ST ~~photosensitive~~ resin compn near IR absorber; near IR  
 absorbing phthalocyanine colorant ~~photosensitive~~ compn;  
 fine pattern optical filter manuf LCD  
 IT Optical materials  
 (IR absorbers; ~~photosensitive~~ resin compns. containing  
 phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)  
 IT IR materials  
 (absorbers; ~~photosensitive~~ resin compns. containing  
 phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)  
 IT Dyes  
 (near-IR-absorbing, phthalocyanines; ~~photosensitive~~  
 resin compns. containing phthalocyanine colorants and giving  
 near-IR-absorbing fine patterns for optical filters for LCD)  
 IT Liquid crystal displays  
 Optical filters  
 Photoimaging materials  
 (~~photosensitive~~ resin compns. containing phthalocyanine  
 colorants and giving near-IR-absorbing fine patterns for optical  
 filters for LCD)  
 IT 412943-96-5, Excolor IR 10A  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Excolor IR 10A, colorant; ~~photosensitive~~ resin compns.  
 containing phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)  
 IT 845781-82-0, Excolor IR 12  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Excolor IR 12, colorant; ~~photosensitive~~ resin compns.  
 containing phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)  
 IT 928306-01-8, Excolor IR 17

RL: TEM (Technical or engineered material use); USES (Uses)  
 (Excolor IR 17, colorant; ~~photosensitive~~ resin compns.  
 containing phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)

IT 857350-29-9P, Benzyl methacrylate-FA 513M-methacrylic acid copolymer  
 ester with glycidyl methacrylate

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or  
 engineered material use); PREP (Preparation); RACT (Reactant or  
 reagent); USES (Uses)

(binder; ~~photosensitive~~ resin compns. containing  
 phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)

IT 71868-10-5, Irgacure 907

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. initiator; ~~photosensitive~~ resin compns.  
 containing phthalocyanine colorants and giving near-IR-absorbing fine  
 patterns for optical filters for LCD)

IT 1233966-20-5P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or  
 chemical process); TEM (Technical or engineered material use); PREP  
 (Preparation); PROC (Process); USES (Uses)

(~~photosensitive~~ resin compns. containing phthalocyanine  
 colorants and giving near-IR-absorbing fine patterns for optical  
 filters for LCD)

IT 29570-58-9, Dipentaerythritol hexaacrylate

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
 (Reactant or reagent); USES (Uses)

(~~photosensitive~~ resin compns. containing phthalocyanine  
 colorants and giving near-IR-absorbing fine patterns for optical  
 filters for LCD)

L30 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2009:1443145 HCAPLUS Full-text

DOCUMENT NUMBER: 152:50817

TITLE: Preparation of 1-3 generation dendritic aryl  
 ether metallophthalocyanine complexes supported  
 on polymer nanoparticle

INVENTOR(S): Peng, Yiru; Zhang, Hong; Huang, Baoquan

PATENT ASSIGNEE(S): Fujian Normal University, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
 32pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
CN 101580506	A	20091118	CN 2009-10111846	200905 26
PRIORITY APPLN. INFO.:			CN 2009-10111846	200905 26

OTHER SOURCE(S): CASREACT 152:50817; MARPAT 152:50817

GI



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

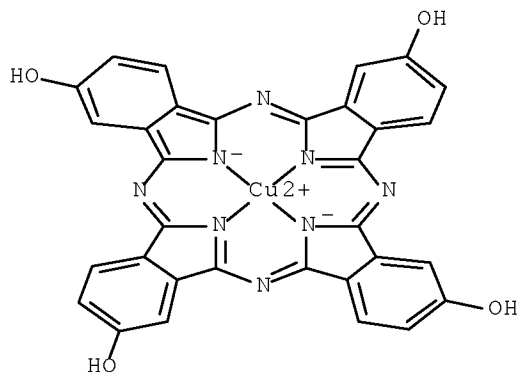
AB The title dendritic phthalocyanine complex is presented in I (M = H, Si, Fe, Ti, Co, Zn, Al or Cu; R = cyano, nitro, carboxy or ester group). The title polymer nanoparticle is prepared by dissolving poly(N-benzyloxycarbonyl lysine)-polyethylene glycol-poly(N-benzyloxycarbonyl lysine) and polyethylene glycol-poly(N-benzyloxycarbonyl lysine) in DMF/DMSO, dissolving compound (9), (10) or (11) in DMF, mixing the two solns., adding water, dialyzing for 48-72 h, and membrane filtration. The compound (9), (10) or (11) can be replaced with compound (12), (13) or (14), and the DMF solvent for dissolving can be changed into Na dihydrogen phosphate. The amphiphilic block copolymer can be polylysine-polyethylene glycol-polylysine and polyethylene glycol-polylysine, and poly(N-benzyloxycarbonyl lysine)-polyethylene glycol-poly(N-benzyloxycarbonyl lysine) and polyethylene glycol-poly(N-benzyloxycarbonyl lysine). The title complex and the complex-loading polymer nanoparticle can be used as photosensitizer for photodynamic therapy.

IT 21707-33-5DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide  
1196456-14-0P 1196456-15-1P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of 1-3 generation dendritic aryl ether  
metallophthalocyanine complexes supported on polymer nanoparticle  
and their use as photosensitizer for photodynamic  
therapy)

RN 21707-33-5 HCAPLUS

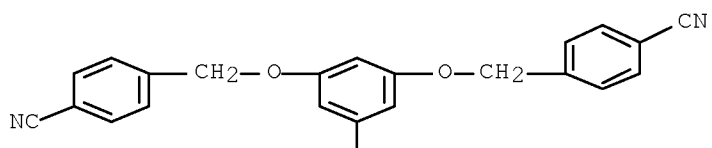
CN Copper, [29H,31H-phthalocyanine-2,9,16,23-tetrolato(2-)-  
κN29,κN30,κN31,κN32]-, (SP-4-1)- (9CI) (CA  
INDEX NAME)



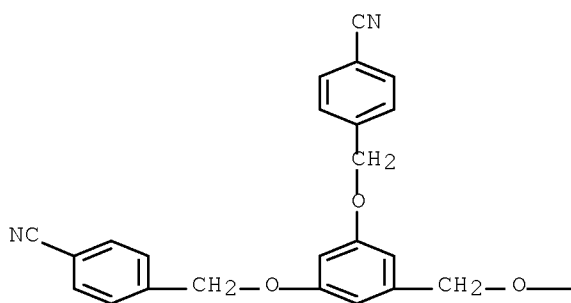
RN 1196456-14-0 HCAPLUS

CN Copper, [[4,4',4'',4''',4'''',4''''',4''''''',4''''''''-[(29H,31H-phthalocyanine-2,9,16,23-tetrayl-  
κN29,κN30,κN31,κN32)tetrakis[oxymethylene-  
5,1,3-benzenetriylbis(oxymethylene)]]octakis[benzonitrilato]](2-)]-,  
(SP-4-1)- (CA INDEX NAME)

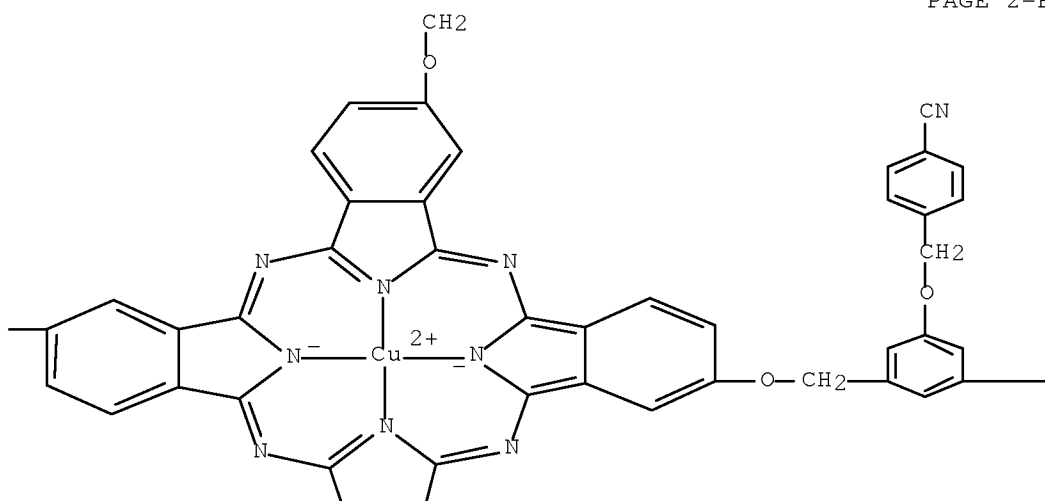
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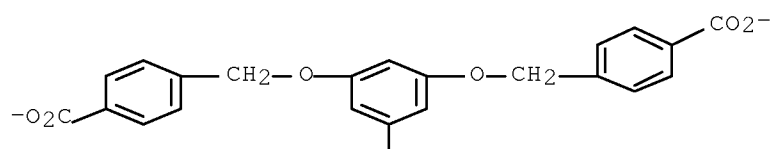


\*OCC1=CC=C(C=C1)C#N $\text{NC}-$ Cc1ccc(cc1)COc2cc(COc3ccc(C#N)cc3)cc(COc4ccccc4O)c2

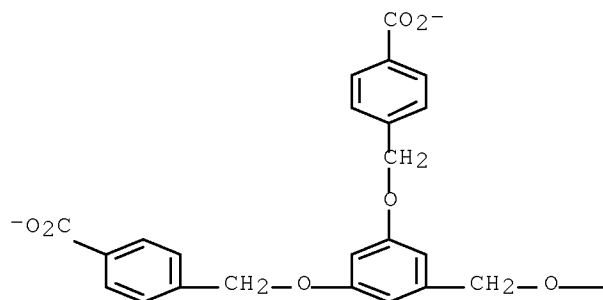
RN 1196456-15-1 HCAPLUS  
CN Cuprate(8-), [[4,4',4'',4''',4'''',4''''',4''''',4''''''',4''''''''-[(29H,31H-phthalocyanine-2,9,16,23-tetrayl-

κN29, κN30, κN31, κN32) tetrakis[oxyethylene-  
5,1,3-benzenetriylbis(oxyethylene)] octakis[benzenecarboxylato]] (10-  
)]-, hydrogen (1:8), (SP-4-1)- (CA INDEX NAME)

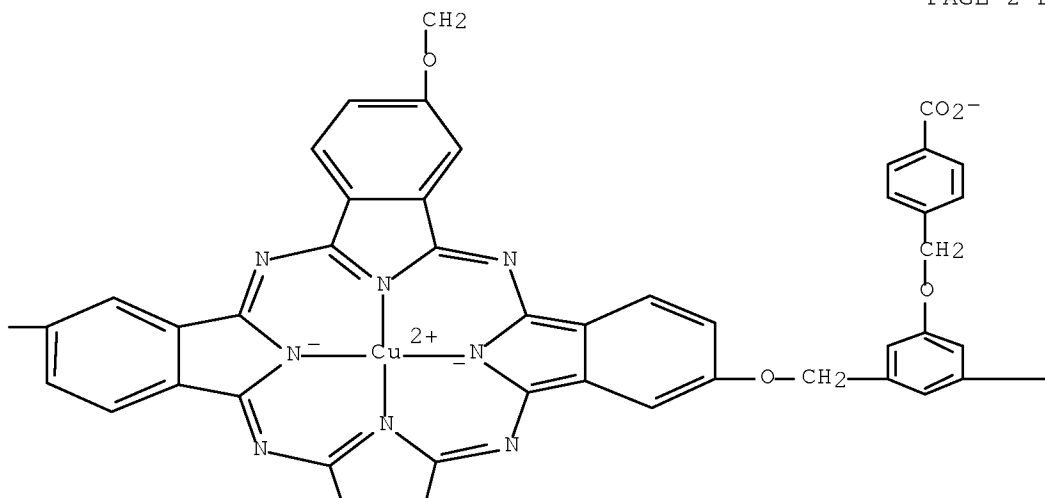
PAGE 1-B



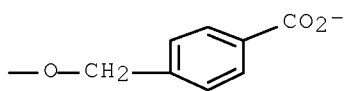
PAGE 2-A



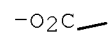
PAGE 2-B



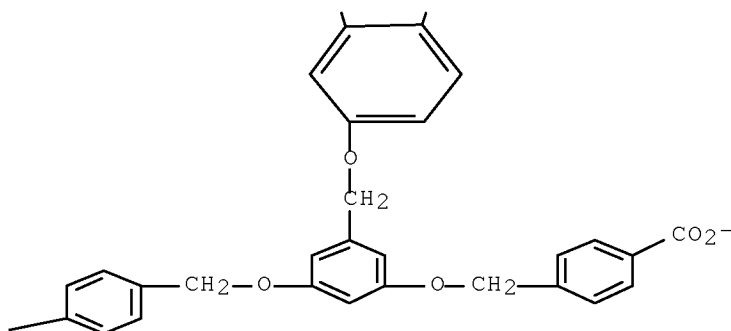
PAGE 2-C



PAGE 3-A



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IPCI C07D0487-22 [I,A]; C07D0487-00 [I,C\*]; C08L0077-04 [I,A];  
 C08L0077-00 [I,C\*]; C08L0071-02 [I,A]; C08L0071-00 [I,C\*];  
 C08K0005-3467 [I,A]; C08K0005-00 [I,C\*]; A61K0031-409 [I,A];  
 A61K0041-00 [I,A]; A61K0031-785 [I,A]; A61K0031-74 [I,C\*]  
 IPCR C07D0487-00 [I,C]; C07D0487-22 [I,A]; A61K0031-409 [I,C];  
 A61K0031-409 [I,A]; A61K0031-74 [I,C]; A61K0031-785 [I,A];  
 A61K0041-00 [I,C]; A61K0041-00 [I,A]; C08K0005-00 [I,C];  
 C08K0005-3467 [I,A]; C08L0071-00 [I,C]; C08L0071-02 [I,A];  
 C08L0077-00 [I,C]; C08L0077-04 [I,A]  
 CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 35, 63  
 ST polymer supported dendritic metallophthalocyanine prepn  
 photosensitizer photodynamic therapy  
 IT Polyesters  
 RL: DGN (Diagnostic use); IMF (Industrial manufacture); PRP  
 (Properties); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (dendrimers; preparation of 1-3 generation dendritic aryl ether  
 metallophthalocyanine complexes supported on polymer nanoparticle  
 and their use as photosensitizer for photodynamic  
 therapy)  
 IT Dendrimers  
 RL: DGN (Diagnostic use); IMF (Industrial manufacture); PRP  
 (Properties); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (polyesters; preparation of 1-3 generation dendritic aryl ether  
 metallophthalocyanine complexes supported on polymer nanoparticle  
 and their use as photosensitizer for photodynamic  
 therapy)  
 IT Nanoparticles  
 Photodynamic therapy  
 Photosensitizers, pharmaceutical  
 (preparation of 1-3 generation dendritic aryl ether  
 metallophthalocyanine complexes supported on polymer nanoparticle  
 and their use as photosensitizer for photodynamic  
 therapy)  
 IT Metallophthalocyanines  
 RL: DGN (Diagnostic use); IMF (Industrial manufacture); PRP  
 (Properties); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (preparation of 1-3 generation dendritic aryl ether

metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic therapy)

## IT Dendrimers

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(preparation of 1-3 generation dendritic aryl ether metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic therapy)

## IT 68922-92-9DP, dendrimer, metallophthalocyanin derivs.

158620-94-1DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 1196456-07-1P 1196456-09-3P

RL: DGN (Diagnostic use); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 1-3 generation dendritic aryl ether metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic therapy)

## IT 21707-33-5DP, dendritic derivs. with 3,5-dihydroxybenzyl

alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 58054-68-5DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 263720-15-6DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 369361-75-1DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 957763-21-2DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 1196456-10-6P 1196456-11-7P 1196456-12-8P 1196456-13-9P ~~1196456-14-0P~~ ~~1196456-15-1P~~ 1196456-16-2P 1196456-17-3P 1196456-18-4P 1196456-19-5P 1196456-20-8P 1196456-23-1DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide 1196456-26-4P 1196456-28-6P 1196456-29-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of 1-3 generation dendritic aryl ether metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic therapy)

## IT 146670-57-7P 146670-58-8P 146670-59-9P 151136-09-3P

151136-13-9P 1196456-04-8P 1196456-05-9P 1196456-06-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of 1-3 generation dendritic aryl ether metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic therapy)

## IT 558-13-4, Carbon tetrabromide 17201-43-3 29654-55-5 31643-49-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of 1-3 generation dendritic aryl ether metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic therapy)

## IT 207746-61-0 851024-37-8

RL: NUU (Other use, unclassified); USES (Uses)

(support; preparation of 1-3 generation dendritic aryl ether metallophthalocyanine complexes supported on polymer nanoparticle and their use as ~~photosensitizer~~ for photodynamic

therapy)

L30 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2009:1335266 HCAPLUS Full-text  
 DOCUMENT NUMBER: 151:563789  
 TITLE: Aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as  
~~photosensitizers~~ for photodynamic  
 therapy, and preparation method thereof  
 INVENTOR(S): Peng, Yiru; Zhang, Hong  
 PATENT ASSIGNEE(S): Fujian Normal University, Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
 25pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 101565421	A	20091028	CN 2009-10111845	200905 26
PRIORITY APPLN. INFO.:			CN 2009-10111845	200905 26

OTHER SOURCE(S): MARPAT 151:563789

AB The title aryl ether type dendritic phthalocyanine and metallophthalocyanins have three chemical structures as shown in page 2-4, wherein M = H, Si, Fe, Ti, Co, Zn, Al, or Cu; and R = CN, NO<sub>2</sub>, COOH, or ester group. The preparation method comprises performing Frechet reaction on 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide to obtain dendritic alcs. of 1-3 generation with CN as terminal group; allowing to react with 4-nitrophthalonitrile to obtain dendritic phthalocyanin precursors of 1-3 generation with CN as terminal group; cyclizing in the presence of 1,8-diazabicyclo[5.4.0]undec-7-ene as catalyst and/or inorg. salt template to obtain aryl ether type dendritic phthalocyanins or metallophthalocyanins of 1-3 generation with CN as terminal group; and/or hydrolyzing CN terminal group into COOH terminal group. The inventive dendritic phthalocyanine and metallophthalocyanins of 1-3 generation can not aggregate even at high concentration and have high quantum yield of singlet O and high ~~photosensitive~~ activity, and is used as ~~photosensitizers~~ for photodynamic therapy.

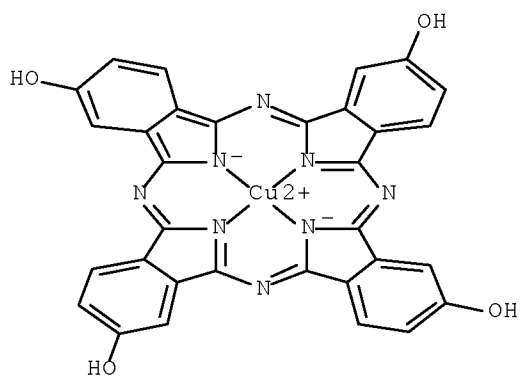
IT 21707-33-5DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide  
 1196456-14-0P 1196456-15-1P

RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of aryl ether type dendritic phthalocyanine and metallophthalocyanins of 1-3 generation as  
~~photosensitizers~~ for photodynamic therapy)

RN 21707-33-5 HCAPLUS

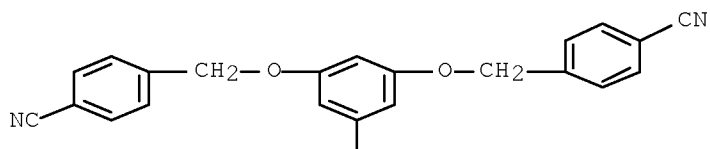
CN Copper, [29H,31H-phthalocyanine-2,9,16,23-tetrolato(2-)-  
 κN29,κN30,κN31,κN32]-, (SP-4-1)-(9CI) (CA  
 INDEX NAME)



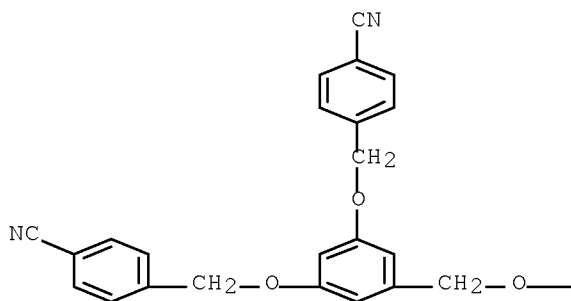


RN	1196456-14-0	HCAPLUS
CN	Copper, [[4,4',4'',4''',4'''',4''''',4''''',4''''''-(29H,31H-phthalocyanine-2,9,16,23-tetrayl-κN29,κN30,κN31,κN32)tetrakis[oxymethylene-5,1,3-benzenetriylbis(oxymethylene)]]octakis[benzonitrilato]](2-)]-, (SP-4-1)- (CA INDEX NAME)	

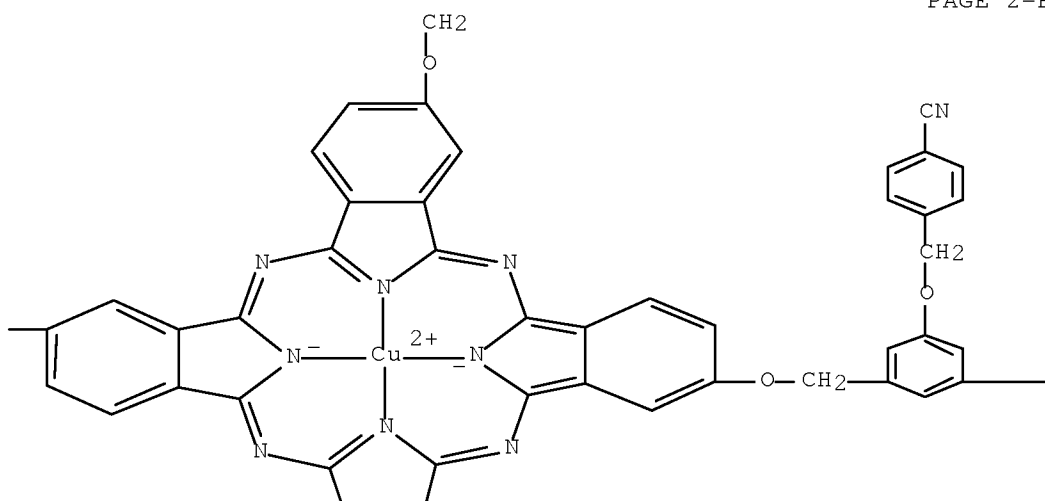
PAGE 1-B



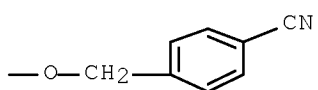
PAGE 2-A



PAGE 2-B

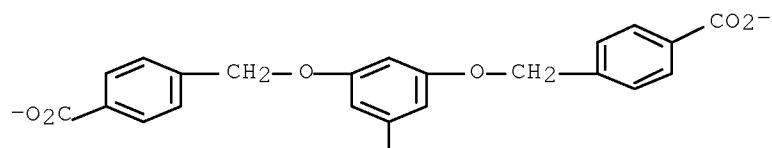


PAGE 2-C

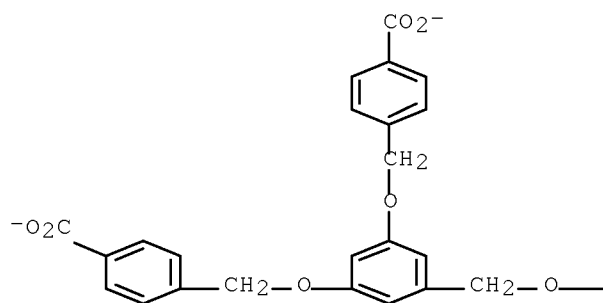


RN 1196456-15-1 HCAPLUS  
CN Cuprate(8-), [[4,4',4'',4''',4'''',4''''',4''''''',4''''''''-(29H,31H-phthalocyanine-2,9,16,23-tetrayl-κN29,κN30,κN31,κN32)tetrakis[oxymethylene-5,1,3-benzenetriylbis(oxymethylene)]]octakis[benzenecarboxylato]](10-)]-, hydrogen (1:8), (SP-4-1)- (CA INDEX NAME)

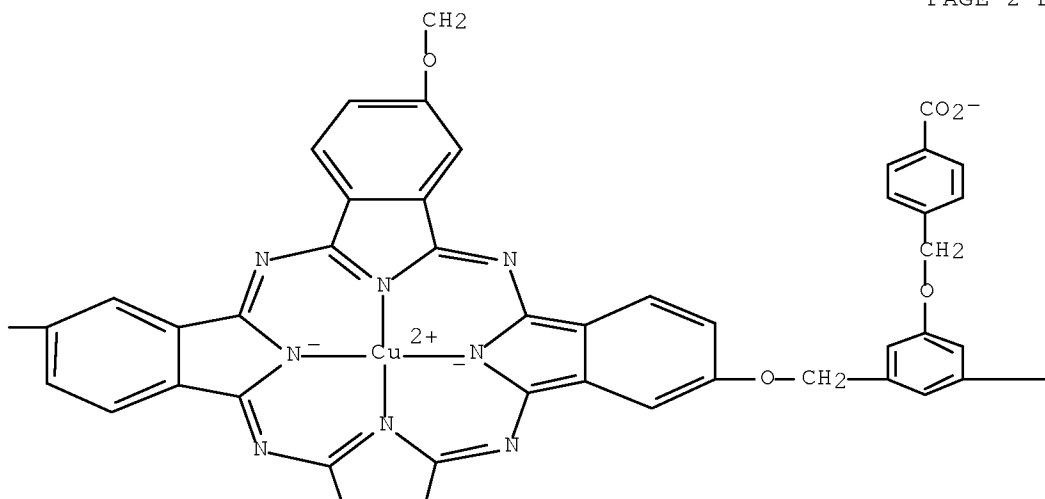
PAGE 1-B



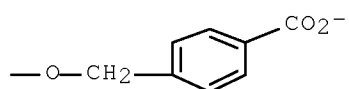
PAGE 2-A



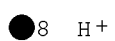
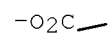
PAGE 2-B



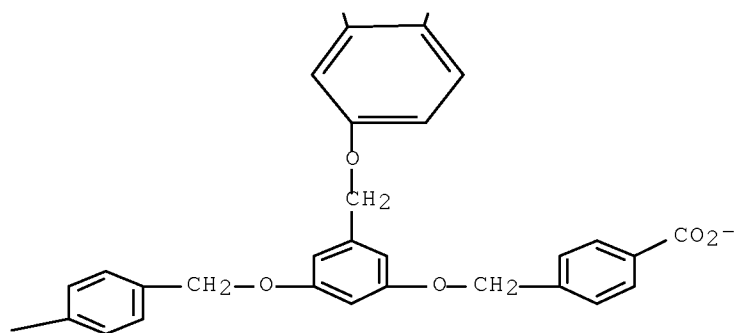
PAGE 2-C



PAGE 3-A



PAGE 3-B



IPCI C07D0487-22 [I,A]; C07D0487-00 [I,C\*]; A61K0031-409 [I,A];  
 A61K0041-00 [I,A]  
 IPCR C07D0487-00 [I,C]; C07D0487-22 [I,A]; A61K0031-409 [I,C];  
 A61K0031-409 [I,A]; A61K0041-00 [I,C]; A61K0041-00 [I,A]  
 CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 35, 63  
 ST dendritic phthalocyanine metallophthalocyanin prepn photodynamic  
 therapy photosensitizer  
 IT Photodynamic therapy  
 Photosensitizers, pharmaceutical  
 (preparation of aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as  
 photosensitizers for photodynamic therapy)  
 IT Dendrimers  
 Metallophthalocyanines  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP  
 (Preparation)  
 (preparation of aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as  
 photosensitizers for photodynamic therapy)  
 IT 6674-22-2, 1,8-Diazabicyclo[5.4.0]undec-7-ene  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as  
 photosensitizers for photodynamic therapy)  
 IT 68922-92-9DP, dendrimer, metallophthalocyanin derivs.  
 158620-94-1DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and  
 p-cyanobenzyl bromide or p-carboxybenzyl bromide 1196456-07-1P  
 RL: DGN (Diagnostic use); IMF (Industrial manufacture); PRP  
 (Properties); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (preparation of aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as  
 photosensitizers for photodynamic therapy)  
 IT 21707-33-5DP, dendritic derivs. with 3,5-dihydroxybenzyl  
 alc. and p-cyanobenzyl bromide or p-carboxybenzyl bromide  
 58054-68-5DP, dendritic derivs. with 3,5-dihydroxybenzyl alc. and  
 p-cyanobenzyl bromide or p-carboxybenzyl bromide 263720-15-6DP,  
 dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl  
 bromide or p-carboxybenzyl bromide 369361-75-1DP, dendritic  
 derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or  
 p-carboxybenzyl bromide 957763-21-2DP, dendritic derivs. with  
 3,5-dihydroxybenzyl alc. and p-cyanobenzyl bromide or p-carboxybenzyl  
 bromide 1196456-09-3P 1196456-10-6P 1196456-11-7P  
 1196456-12-8P 1196456-13-9P ~~1196456-14-0P~~  
~~1196456-15-1P~~ 1196456-16-2P 1196456-17-3P  
 1196456-18-4P 1196456-19-5P 1196456-20-8P 1196456-23-1DP,  
 dendritic derivs. with 3,5-dihydroxybenzyl alc. and p-cyanobenzyl  
 bromide or p-carboxybenzyl bromide 1196456-26-4P 1196456-28-6P  
 1196456-29-7P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as  
 photosensitizers for photodynamic therapy)  
 IT 146670-57-7P 146670-58-8P 146670-59-9P 151136-09-3P  
 151136-13-9P 1196456-04-8P 1196456-05-9P 1196456-06-0P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (preparation of aryl ether type dendritic phthalocyanine and  
 metallophthalocyanins of 1-3 generation as

photosensitizers for photodynamic therapy)

IT 558-13-4, Carbon tetrabromide 17201-43-3 29654-55-5,  
3,5-Dihydroxybenzyl alcohol 31643-49-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aryl ether type dendritic phthalocyanine and  
metallophthalocyanins of 1-3 generation as  
photosensitizers for photodynamic therapy)

L30 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2009:251696 HCAPLUS Full-text

DOCUMENT NUMBER: 150:362817

TITLE: ~~Photosensitive~~ colorant compositions  
for manufacture of color filters of display  
devices

INVENTOR(S): Akiyama, Yuji

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
77pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

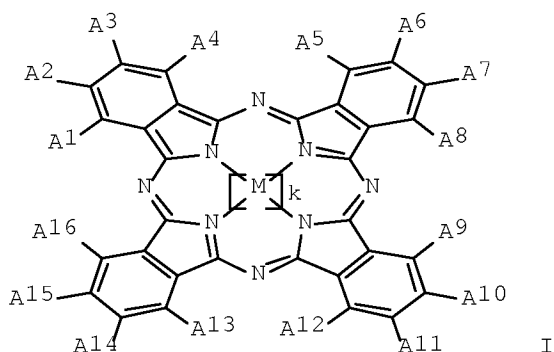
LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
CN 101373329	A	20090225	CN 2008-10210010	200808 22
JP 2009051896	A	20090312	JP 2007-218137	200708 24
KR 2009021083	A	20090227	KR 2008-81771	200808 21
PRIORITY APPLN. INFO.:			JP 2007-218137	A 200708 24

OTHER SOURCE(S): MARPAT 150:362817  
GI



AB The compns. comprise a colorant containing I (A1-A16 = H, halo, substituent; M = metal or metal oxide; k = 0,1) and optionally, other dyes (e.g., azo dye), and a polymerizable compound Curing the compns. under i-line (365 nm) exposure gave a film showing good heat and light resistance.

IT 1133691-69-6P

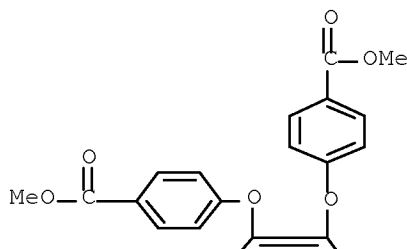
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photosensitive colorant compns. for manufacture of heat- and light-resistant color filters of display devices)

RN 1133691-69-6 HCAPLUS

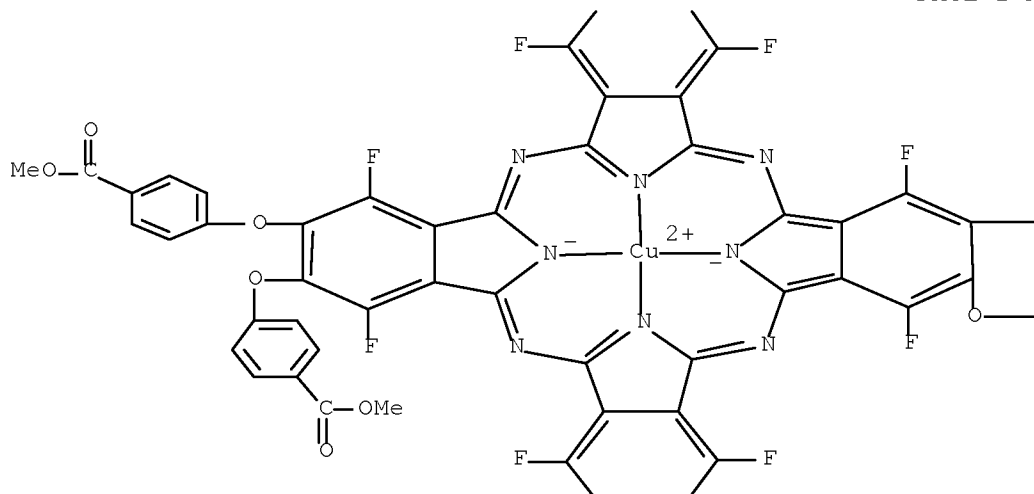
CN Copper, [[1,1',1'',1''',1'''',1''''',1''''',1''''''-octamethyl 4,4',4'',4''',4'''',4''''',4''''',4''''''-(1,4,8,11,15,18,22,25-octafluoro-29H,31H-phthalocyanine-2,3,9,10,16,17,23,24-octayl-κN29,κN30,κN31,κN32)octakis(oxy)]octakis[benzoato]](2-)]-, (SP-4-1)- (CA INDEX NAME)

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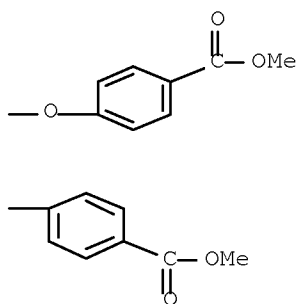




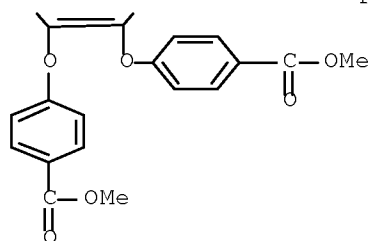
PAGE 2-A



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PAGE 3-A



IPCI G03F0007-004 [I,A]; G02B0005-23 [I,A]; G02B0005-22 [I,C\*];  
 C09B0047-04 [I,A]  
 IPCR G03F0007-004 [I,C]; G03F0007-004 [I,A]; C09B0047-04 [I,C];  
 C09B0047-04 [I,A]; G02B0005-22 [I,C]; G02B0005-23 [I,A]

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST phthalocyanine dye ~~photosensitive~~ compn color filter display

IT Azo dyes  
Dyes  
Liquid crystal displays  
Optical filters  
Optical imaging devices  
Photoimaging materials  
(~~photosensitive~~ colorant compns. for manufacture of heat- and light-resistant color filters of display devices)

IT 117-61-3, 4,4'-Diaminobiphenyl-2,2'-disulfonic acid 543-82-8, 1,5-Dimethylhexylamine 769-42-6 22374-89-6, 3-Aminobutylbenzene 28141-13-1 163917-12-2 1133229-05-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(~~photosensitive~~ colorant compns. for manufacture of heat- and light-resistant color filters of display devices)

IT 1105039-71-1P 1105712-71-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(~~photosensitive~~ colorant compns. for manufacture of heat- and light-resistant color filters of display devices)

IT 217483-17-5P 857350-29-9P, Benzyl methacrylate-FA 513M-methacrylic acid copolymer, ester with glycidyl methacrylate 1105039-74-4P 1133229-06-7P ~~1133691-69-6P~~  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(~~photosensitive~~ colorant compns. for manufacture of heat- and light-resistant color filters of display devices)

IT 29570-58-9, DPHA 101661-95-4, A GLY 3E 103998-41-0, NK 3212  
RL: TEM (Technical or engineered material use); USES (Uses)  
(~~photosensitive~~ colorant compns. for manufacture of heat- and light-resistant color filters of display devices)

L30 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1099295 HCAPLUS Full-text

DOCUMENT NUMBER: 150:182126

TITLE: Synthesis, characterization and ~~photosensitivity~~ study of tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallo phthalocyanines

AUTHOR(S): Xue, Jin-Ping; Liu, Hong; Fan, Chang-An; Hong, Hu-Ming; Chen, Nai-Sheng; Huang, Jin-Ling

CORPORATE SOURCE: Institute of Functional Materials, College of Chemistry and Chemical Engineering, Fuzhou University, Fuzhou, 350002, Peop. Rep. China

SOURCE: Huaxue Xuebao (2007), 65(16), 1605-1611

CODEN: HHHPA4; ISSN: 0567-7351

PUBLISHER: Huaxue Xuebao Bianjibu

DOCUMENT TYPE: Journal

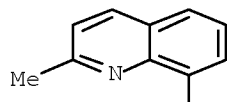
LANGUAGE: Chinese

OTHER SOURCE(S): CASREACT 150:182126

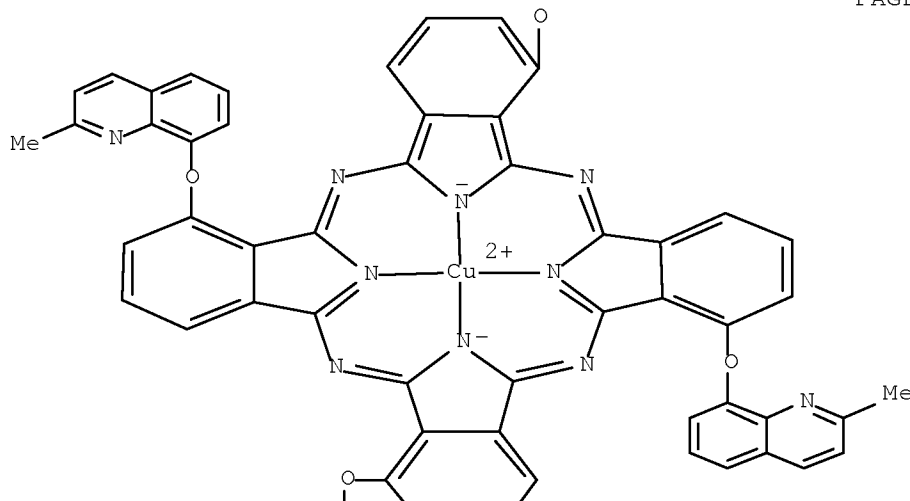
AB Cobalt(II), nickel(II), copper(II) and zinc(II) coordination compds. of tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)phthalocyanine were synthesized by means of "DBU method". The title complexes were characterized by elemental anal., mass spectrum, UV-Vis and IR spectra. In addition, the rates of photo-generating singlet oxygen and the rate consts. of photodynamic oxidation of amino-acid for the complexes were measured by irradiation of laser at 670 nm, and the relations between their structures and ~~photosensitivities~~ were discussed.

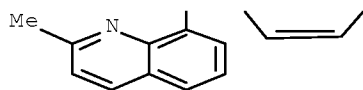
IT 1072843-26-5P  
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic  
preparation); PREP (Preparation); USES (Uses)  
(preparation and photosensitivity study of  
tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophthalocyanines)  
RN 1072843-26-5 HCAPLUS  
CN Copper, [1,8,15,22-tetrakis[(2-methyl-8-quinolinyl)oxy]-29H,31H-  
phthalocyaninato(2-)- $\kappa$ N29, $\kappa$ N30, $\kappa$ N31, $\kappa$ N32]-,  
(SP-4-1)- (CA INDEX NAME)

PAGE 1-A



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CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 67, 74  
 ST tetrakis-methylquinolinoxy metallophthalocyanine prepn  
 photosensitivity  
 IT Catalysts  
 (photochem.; preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)  
 IT Light-sensitive materials  
 (preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)  
 IT Metallophtalocyanines  
 RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic  
 preparation); PREP (Preparation); USES (Uses)  
 (preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)  
 IT 6674-22-2, DBU  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)  
 IT 1072843-25-4P 1072843-26-5P 1072843-28-7P  
 1072843-30-1P  
 RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic  
 preparation); PREP (Preparation); USES (Uses)  
 (preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)  
 IT 60-18-4, Tyrosine, reactions 73-22-3, Tryptophan, reactions  
 899659-99-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)  
 IT 60-18-4DP, Tyrosine, oxidation product 73-22-3DP, L-Tryptophan,  
 oxidation product  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and photosensitivity study of  
 tetrakis- $\alpha$ -(2-methyl-8-quinolinoxy)metallophtalocyanines)

L30 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2002:807373 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:312357  
 TITLE: Manufacture of sulfonyloxyated phthalocyanine  
 compounds with good solvent solubility and  
 light sensitivity  
 INVENTOR(S): Oishi, Takao; Yashiro, Toru; Taniguchi,  
 Masatoshi; Narizuka, Toshiro; Aoi, Hironao  
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan; Yamada Chemical Co.,  
 Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2002309119	A	20021023	JP 2001-118841	200104 17
JP 4472205	B2	20100602	JP 2001-118841	200104 17
PRIORITY APPLN. INFO.:				

OTHER SOURCE(S): MARPAT 137:312357

AB The title compds. useful for optical recording such as CD-R application, are obtained from specific metal phthalocyanine compds. bearing arenesulfonyloxylated groups on the aromatic rings. Thus, adding 0.41 g a 60% oil suspension of NaH 0.41 to a mixture of 0.75 g  $\alpha,\alpha,\alpha,\alpha$ -tetrahydroxyvanadyl phthalocyanine and 10 mL dry THF, mixing for 10 min at 40°, adding 2.52 g 4-(trifluoromethyl)benzenesulfonyl chloride and mixing at 50-55° for 120 h gave a pigment.

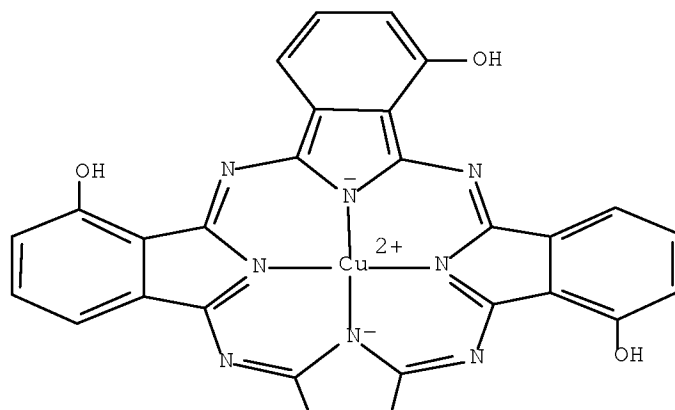
IT 20468-22-8P

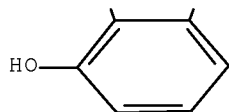
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; manufacture of sulfonyloxylated phthalocyanine compds. with good solvent solubility and light sensitivity)

RN 20468-22-8 HCAPLUS

CN Copper, [29H,31H-phthalocyanine-1,8,15,22-tetrolato(2-)- $\kappa$ N29, $\kappa$ N30, $\kappa$ N31, $\kappa$ N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)





- IPCI C09B0047-08 [I,A]; C09B0047-04 [I,C\*]; B41M0005-26 [I,A];  
C07D0487-22 [I,A]; C07D0487-00 [I,C\*]; G11B0007-244 [I,A];  
G11B0007-24 [I,C\*]
- IPCR B41M0005-26 [I,C\*]; B41M0005-26 [I,A]; C07D0487-00 [I,C\*];  
C07D0487-22 [I,A]; C09B0047-04 [I,C\*]; C09B0047-24 [I,A];  
G11B0007-24 [I,C\*]; G11B0007-24 [I,A]; G11B0007-244 [I,A];  
C09B0047-08 [I,A]
- CC 41-7 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
Photographic Sensitizers)  
Section cross-reference(s): 76
- IT Optical ROM disks  
(manufacture of sulfonyloxyated phthalocyanine compds. with good  
solvent solubility and light sensitivity)
- IT Transition metal complexes  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(phthalocyanine, arenesulfonyloxyated compds.; manufacture of  
sulfonyloxyated phthalocyanine compds. with good solvent solubility  
and light sensitivity)
- IT Metallophthalocyanines  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(transition metal complexes, arenesulfonyloxyated compds.;  
manufacture of sulfonyloxyated phthalocyanine compds. with good  
solvent solubility and light sensitivity)
- IT 19056-23-6P, 3-Methoxyphthalonitrile 20468-22-8P  
80345-84-2P 158621-02-4P 160988-54-5P 473254-09-0P  
473254-10-3P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
(Preparation); RACT (Reactant or reagent)  
(intermediate; manufacture of sulfonyloxyated phthalocyanine compds.  
with good solvent solubility and light sensitivity  
)
- IT 473253-97-3P 473253-98-4P 473254-00-1P 473254-01-2P  
473254-02-3P 473254-03-4P 473254-04-5P 473254-05-6P  
473254-06-7P 473254-07-8P 473254-08-9P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of sulfonyloxyated phthalocyanine compds. with good  
solvent solubility and light sensitivity)
- IT 67-56-1, Methanol, reactions 98-09-9, Benzenesulfonyl chloride  
98-59-9, p-Toluenesulfonyl chloride 98-60-2,  
4-Chlorobenzenesulfonyl chloride 773-64-8,  
2,4,6-Trimethylbenzenesulfonyl chloride 2991-42-6,  
4-(Trifluoromethyl)benzenesulfonyl chloride 6553-96-4,  
2,4,6-Triisopropylbenzenesulfonyl chloride 7447-39-4, Copper  
chloride, reactions 7646-85-7, Zinc chloride, reactions  
7718-98-1, Vanadium trichloride 15084-51-2,  
4-tert-Butylbenzenesulfonyl chloride 51762-67-5,  
3-Nitrophthalonitrile 244763-85-7 473254-11-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(manufacture of sulfonyloxyated phthalocyanine compds. with good

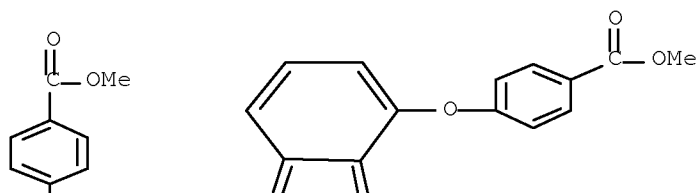
solvent solubility and light sensitivity)

L30 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2001:541839 HCAPLUS Full-text  
 DOCUMENT NUMBER: 135:129597  
 TITLE: Photopolymerizing image recording material for  
 lithographic plate  
 INVENTOR(S): Kunita, Kazuto; Nagase, Hiroyuki  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

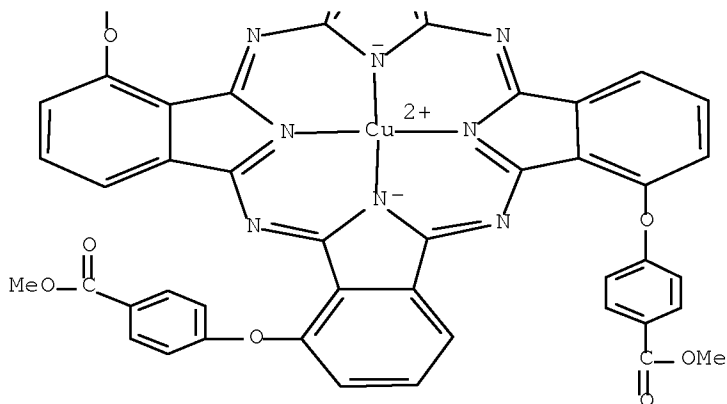
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
JP 2001201850	A	20010727	JP 2000-13049	200001 21
JP 4139539	B2	20080827	JP 2000-13049	200001 21
PRIORITY APPLN. INFO.:				

OTHER SOURCE(S): MARPAT 135:129597  
 AB The recording material has a ~~photosensitive~~ layer (A) containing (i) an addition polymerizable compound having ethylenic unsatd. bond, (ii) a photopolymn. initiator, and (iii) a colorant which exists as a mol. aggregate in A and is soluble in an alkali developing solution Preferably, the colorant is a phthalocyanine-type dye. The material shows high sensitivity and stable development.  
 IT 351344-96-2P  
 RL: DEV (Device component use); PNU (Preparation, unclassified);  
 PREP (Preparation); USES (Uses)  
 (preparation of, pigment; photopolymg. image recording material containing alkali-soluble colorant for lithog. plate)  
 RN 351344-96-2 HCAPLUS  
 CN Copper, [[tetramethyl 4,4',4'',4'''-(29H,31H-phthalocyanine-1,8,15,22-tetrayl-κN29,κN30,κN31,κN32)tetrakis(oxy)]tetrakis[benzoato]](2-)]-, (SP-4-1)- (9CI) (CA INDEX NAME)

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IPCI G03F0007-004 [I,A]; G03F0007-027 [I,A]; G03F0007-00 [I,A];  
 C08F0002-48 [I,A]; C08F0002-46 [I,C\*]  
 IPCR G03F0007-027 [I,C\*]; G03F0007-027 [I,A]; C08F0002-46 [I,C\*];  
 C08F0002-48 [I,A]; G03F0007-004 [I,C\*]; G03F0007-004 [I,A];  
 G03F0007-09 [I,C\*]; G03F0007-105 [I,A]; G03F0007-00 [I,C];  
 G03F0007-00 [I,A]  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 IT 351344-96-2P 351344-99-5P  
 RL: DEV (Device component use); PNU (Preparation, unclassified);  
 PREP (Preparation); USES (Uses)  
 (preparation of, pigment; photopolymg. image recording material containing  
 alkali-soluble colorant for lithog. plate)  
 OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
 RECORD (2 CITINGS)



DOCUMENT NUMBER: 133:244985  
 TITLE: Molecular orientation-photoconductivity relationship study of phthalocyanine polymer-oriented thin films  
 AUTHOR(S): Chen, Hong-Zheng; Wang, Mang; Yang, Shi-Lin  
 CORPORATE SOURCE: Department of Polymer Science and Engineering, Zhejiang University, Hangzhou, 310027, Peop. Rep. China  
 SOURCE: Journal of Applied Polymer Science (2000), 77(11), 2331-2339  
 CODEN: JAPNAB; ISSN: 0021-8995  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The mol. orientation-photocond. relationships of several kinds of phthalocyanine polymer (PPc)-oriented thin films have been studied in double-layered photoreceptor devices, where the charge-generation layers (CGLs) are phthalocyanine polymer-oriented thin films and the charge-transportation layers (CTLs) are composed of hole transporting materials of tetra-Ph benzidine or hydrazone. The oriented thin films containing PPc dispersed in polyvinyl difluoride (PVDF) were prepared by the elec. field orientation. The results showed that the photosensitivities of the phthalocyanine polymer (PPCs)-oriented thin films were higher than those of the unoriented PPcs thin films, and varied with their mol. structures and the mol. stacking in the films. This was thought to be due to the mol. orientation effect, which was demonstrated by the analyses of the polarized fluorescence, DSC, FTIR reflection absorption spectroscopy (FTIR-RAS), and angle-dependent XPS.

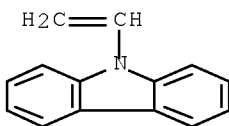
IT 292832-89-4P 292832-90-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (mol. orientation-photocond. relationship study of phthalocyanine polyvinyl difluoride polymer-oriented thin films)

RN 292832-89-4 HCAPLUS

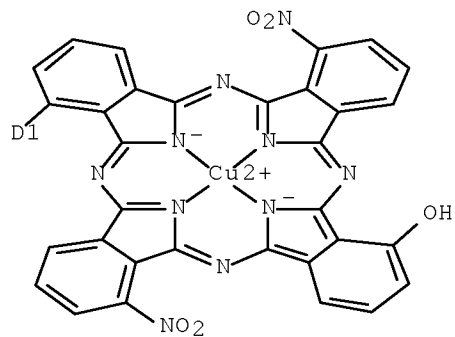
CN Copper, [15-(9-ethenyl-9H-carbazolyl)-8,22-dinitro-29H,31H-phthalocyanin-9-olato(2-)-κN29,κN30,κN31,κN32]-, polymer with acetonitrile (9CI) (CA INDEX NAME)

CM 1

CRN 176050-69-4  
 CMF C46 H23 Cu N11 O5  
 CCI CCS, IDS

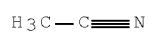


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CM 2

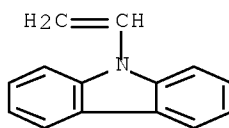
CRN 75-05-8  
CMF C2 H3 N



RN 292832-90-7 HCAPLUS  
CN Copper, [15-(9-ethenyl-9H-carbazolyl)-8,22-dinitro-29H,31H-phthalocyanin-9-olato(2-)-  
 $\kappa\text{N}29,\kappa\text{N}30,\kappa\text{N}31,\kappa\text{N}32$ ]-, polymer with  
4-ethenylpyridine (9CI) (CA INDEX NAME)

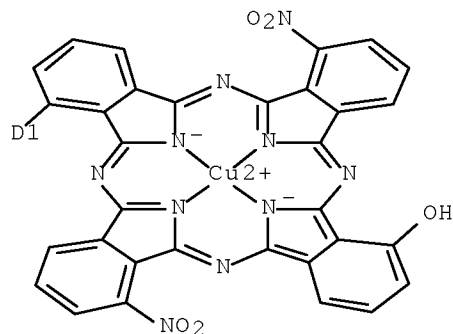
CM 1

CRN 176050-69-4  
CMF C46 H23 Cu N11 O5  
CCI CCS, IDS



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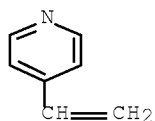
PAGE 2-A



CM 2

CRN 100-43-6

CMF C7 H7 N



CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76

IT 9003-05-8DP, reaction products with copper  
 dinitrophthalocyaninediazonium salt 25067-59-8P,  
 Polyvinylcarbazole 65670-15-7DP, reaction products with diazotized  
 copper diaminodinitrophthalocyanine 146166-28-1DP, diazotized,  
 reaction products with polyacrylamide and  
 poly(acrylamide-vinylcarbazole) 292832-89-4P  
 292832-90-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (mol. orientation-photocond. relationship study of phthalocyanine  
 polyvinyl difluoride polymer-oriented thin films)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
 RECORD (2 CITINGS)

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L30 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 1997:559672 HCAPLUS Full-text  
 DOCUMENT NUMBER: 127:301127  
 ORIGINAL REFERENCE NO.: 127:58715a, 58718a  
 TITLE: Preparation of TiO2 film by hydrolysis of  
 titanium butoxide and interaction between  
 sensitizing dyes and the film

AUTHOR(S): Wang, Liying; Zhang, Yan; Zeng, Guangfu; Xi,  
 Shiquan

CORPORATE SOURCE: Chinese Academy of Sciences, Changchun Inst.

Applied Chemistry, Changchun, 130022, Peop. Rep.  
China

SOURCE: Wuli Huaxue Xuebao (1997), 13(8), 752-755  
CODEN: WHXUEU; ISSN: 1000-6818  
PUBLISHER: Beijing Daxue Chubanshe  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese

AB A method of preparation of stable, homogeneous and controlled thickness TiO<sub>2</sub> film through hydrolysis of Ti(OC<sub>4</sub>H<sub>9</sub>)<sub>4</sub> is introduced in detail. The structure and property of the film have been investigated by means of SEM and FT-IR techniques. The strong quenching effect between sensitizing dyes and TiO<sub>2</sub> film is observed in their fluorescence spectra.

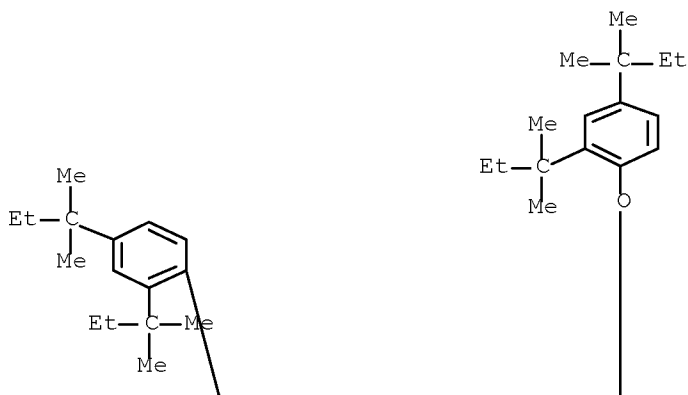
IT 155469-85-5

RL: PRP (Properties)  
(photosensitizing dye showing interaction with titanium  
dioxide film)

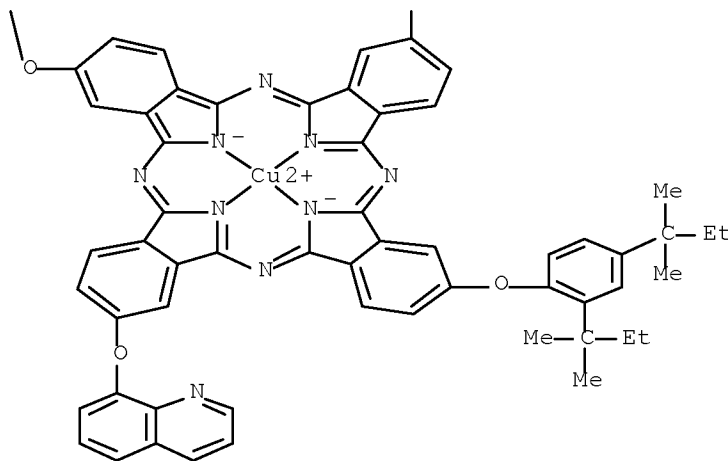
RN 155469-85-5 HCAPLUS

CN Copper, [2,9,16-tris[2,4-bis(1,1-dimethylpropyl)phenoxy]-23-(8-quinolinyloxy)-29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-2)-(9CI) (CA  
INDEX NAME)

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CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 73  
ST titanium dioxide film prepn hydrolysis butoxide; quenching  
photosensitizing dye titanium dioxide film  
IT Fluorescence  
(for studying interaction between photosensitizing dye  
and titanium dioxide film)  
IT Quantum transition  
(in related to interaction between photosensitizing dye  
and titanium dioxide film)  
IT 155469-85-5 197158-40-0  
RL: PRP (Properties)  
(photosensitizing dye showing interaction with titanium  
dioxide film)

L30 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1996:725317 HCAPLUS Full-text

DOCUMENT NUMBER: 126:48352

ORIGINAL REFERENCE NO.: 126:9527a,9530a

TITLE: Dyes for color filters, and  
photosensitive resin compositions  
containing them

INVENTOR(S): Itoh, Hisato; Karasawa, Akio; Sugimoto, Kenichi

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan

SOURCE: U.S., 35 pp., Cont.-in-part of U.S. Ser. No.  
987,960, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 5578419	A	19961126	US 1994-223605	199404 06
US 5789137	A	19980804	US 1996-653252	

				199605 24
US 5948597	A	19990907	US 1998-87845	
				199806 01
US 6306550	B1	20011023	US 1999-344350	
				199906 25
PRIORITY APPLN. INFO.:			JP 1991-328474	A
				199112 12
			US 1992-987960	B2
				199212 11
			US 1994-223605	A3
				199404 06
			US 1996-653252	A3
				199605 24
			US 1998-87845	A3
				199806 01

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 126:48352

AB Dyes suitable for use in the fabrication of color filters are represented by D(A<sub>Y</sub>n<sub>1</sub>)n<sub>2</sub>, where D represents a chromophoric (di)phenoxy- or (phenylthio)anthraquinone nucleus, A denotes a connecting group, Y is a photopolymerizable group having one of several specified structures, n<sub>1</sub> is 1-10,000, and n<sub>2</sub> is 1-10. Thus, 1-amino-4-hydroxy-2-(p-tolyloxy)anthraquinone was condensed with N-(chloromethyl)-2-phenylmaleimide in C<sub>2</sub>H<sub>4</sub>Cl<sub>2</sub> in the presence of ZnCl<sub>2</sub> to give a dye with λ<sub>max</sub> 512 nm.

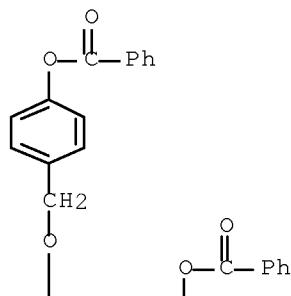
IT 151605-29-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(dyes for color filters and ~~photosensitive~~ resin  
comps. containing them)

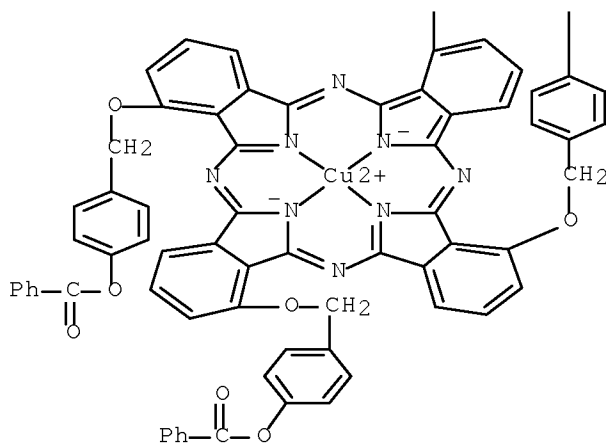
RN 151605-29-7 HCAPLUS

CN Copper, [[29H,31H-phthalocyanine-1,8,15,22-tetrayltetrakis(oxymethylene-4,1-phenylene)tetra benzoato](2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

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INCL 430281100  
 IPCI C09B0001-16 [ICM,6]; C09B0001-00 [ICM,6,C\*]; C09B0062-004 [ICS,6];  
 C09B0062-002 [ICS,6,C\*]  
 IPCR C09B0069-00 [I,C\*]; C09B0069-10 [I,A]; G03F0007-00 [I,C\*];  
 G03F0007-00 [I,A]; G03F0007-027 [I,C\*]; G03F0007-027 [I,A]  
 NCL 430/281.100; 008/647.000; 008/677.000; 008/678.000; 008/679.000;  
 430/007.000; 522/048.000; 522/904.000; 546/347.000; 548/546.000;  
 548/548.000; 552/223.000; 552/226.000; 552/242.000  
 CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 74  
 IT Polyvinyl acetals  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 ((butylpyridinio)vinyl]benzals, chromophore-terminated; dyes for  
 color filters and photosensitive resin compns. containing  
 them)  
 IT Liquid crystal displays

(color filters; dyes for color filters and photosensitive resin compns. containing them)

IT Anthraquinone dyes

(polymerizable; dyes for color filters and photosensitive resin compns. containing them)

IT 151321-27-6P 151321-29-8P 151321-31-2P 151321-32-3P

151321-35-6P 151321-44-7P 151519-43-6P 151677-60-0P

184578-82-3P 184578-83-4P 184578-84-5P 184578-85-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(dyes for color filters and photosensitive resin compns. containing them)

IT 98-88-4, Benzoyl chloride 99-93-4, p-Hydroxyacetophenone

100-20-9, 1,4-Benzenedicarbonyl dichloride 100-52-7, Benzaldehyde,

reactions 107-21-1, 1,2-Ethanediol, reactions 108-89-4,

γ-Picoline 814-68-6, 2-Propenoyl chloride 2389-64-2

3814-20-8, p-Mercaptoacetophenone 16222-29-0,

p-(Dibutylamino)phenol 16474-11-6 21367-40-8 51762-67-5,

3-Nitrophthalonitrile 53013-87-9,

N-(Chloromethyl)-3-phenylmaleimide 54841-24-6,

1,4-Diamino-2-chloroanthraquinone 154021-99-5 184578-81-2

184578-92-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(dyes for color filters and photosensitive resin compns. containing them)

IT 81-42-5DP, 1,4-Diamino-2,3-dichloroanthraquinone, reaction products with low-mol.-weight poly(vinyl alc.) and butyl(formylstyryl)pyridinium bromide 147-14-8DP, polymerizable polyvinyl acetal derivs.

2478-67-3DP, reaction products with low-mol.-weight poly(vinyl alc.)

and butyl(formylstyryl)pyridinium bromide 151321-24-3P

151321-25-4P 151321-26-5P 151321-36-7P 151321-37-8P

151321-38-9P 151321-39-0P 151321-40-3P 151321-41-4P

151321-42-5P 151321-45-8P 151321-46-9P 151321-47-0P

151321-48-1P 151321-49-2P 151321-50-5P 151321-51-6P

151321-52-7P 151321-53-8P 151321-54-9P 151321-55-0P

151321-56-1P 151321-57-2P 151321-58-3P 151321-59-4P

151321-60-7P 151321-61-8P 151321-62-9P 151321-63-0P

151321-66-3P 151321-67-4P 151321-68-5P 151321-69-6P

151321-70-9P 151321-71-0P 151321-72-1P 151321-73-2P

151321-74-3P 151321-77-6P 151321-81-2P 151605-23-1P

151605-25-3P 151605-26-4P 151605-27-5P 151605-28-6P

~~151605-29-7P~~ 151605-30-0P 151605-31-1P 151605-32-2P

151605-33-3P 151629-18-4P 151652-80-1P 151677-55-3P

151677-57-5P 151677-61-1P 151677-62-2P 151677-63-3P

151677-64-4P 151704-26-6P 151704-27-7P 151704-28-8P

151704-38-0P 151710-87-1P 152103-69-0P 155569-73-6P

184578-79-8DP, reaction products with low-mol.-weight poly(vinyl alc.)

and aminochlorohydroxyanthraquinone 184578-86-7P 184578-87-8P

184578-88-9P 184578-91-4P 184578-96-9P 184578-97-0P

184578-98-1P 184578-99-2P 184579-00-8P 184579-01-9P

184579-02-0P 184856-54-0P 184856-55-1P 184856-71-1P

184923-23-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(dyes for color filters and photosensitive resin compns. containing them)

IT 144046-69-5, SD 17

RL: TEM (Technical or engineered material use); USES (Uses)

(dyes for color filters and photosensitive resin compns. containing them)

IT 9002-89-5, Poly(vinyl alcohol)



RL: RCT (Reactant); RACT (Reactant or reagent)  
(low-mol.-weight; dyes for color filters and photosensitive  
resin compns. containing them)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS  
RECORD (4 CITINGS)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

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